

IN THE CLAIMS:

Amendments to the Claims

Please amend claims 1, 19 and 20 as shown below and please cancel claims 21-28, which stand withdrawn from consideration as being directed to non-elected inventions, without prejudice or disclaimer of the subject matter thereof and without prejudice to the right to file divisional applications directed thereto.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A near-field optical probe, comprising:
a substrate; and
a metallic scatterer fabricated on said substrate in a contour of a circular cone or a polygonal pyramid having an axis vertical to a surface of the substrate;
wherein a localized plasmon is excited inside of said metallic scatter.
2. (original) A near-field optical probe, comprising:
a substrate; and
a metallic scatterer fabricated on said substrate in a contour of a planar ellipse having a major axis, a minor axis, and thickness, the major axis, the minor axis, and the thickness being equal to or less than a wavelength of light.
3. (original) A near-field optical probe, comprising:
a substrate; and

a metallic scatterer fabricated on said substrate in a contour of a triangle having a vertex with a radius of curvature and thickness, the radius of curvature and the thickness being equal to or less than a wavelength of light.

4. (original) A near-field optical probe, comprising:

a substrate; and

a metallic scatterer fabricated on said substrate in a contour of a triangle having a first vertex, second vertex, and a third vertex, the first vertex having a radius of curvature less than a radius of curvature of each of the second and third vertices.

5. (original) A near-field optical probe according to claim 3, wherein the triangle is connected to a film in a periphery of the triangle on the plane to dispose an opening in the connecting section, the opening having a radius of curvature greater than a radius of curvature of the vertex of the triangle.

6. (previously presented) A near-field optical probe, comprising a substrate on which a metallic film having a pointed tip end and a metallic film having an arbitrary contour are formed for generating a plasmon resonance, in which an interval between the pointed tip end metallic film and the arbitrarily contoured metallic film is equal to or less than 50 nm.

7. (previously presented) A near-field optical probe, comprising a substrate on which two metallic films each having a pointed tip end are formed for generating a plasmon resonance, in which an interval between the pointed tip ends is equal to or less than 50 nm.

8. (original) A near-field optical probe according to claim 1, further including in a periphery of said scatterer a metallic film, a dielectric film, or a semiconductor film having film thickness substantially equal to height of said scatterer.

9. A near-field optical probe according to claim 8, wherein:
said film is a light shielding film; and
said scatterer is apart from said peripheral film by a gap equal to or less than a wavelength of light.

10. (original) A near-field optical probe according to claim 1, further including a dip in the substrate surface with depth substantially equal to height of said scatterer, wherein said metallic scatterer is formed in said dip.

11. (original) A near-field optical probe according to claim 8, wherein a gap between said scatterer and said peripheral film or between said scatterer and said dip is filled with a light transmitting material.

12. (original) A near-field optical probe according to claim 1, wherein said substrate is a contour of a semi-sphere.

13. (original) A near-field optical probe according to claim 1, further including a light condensing element on said substrate.

14. (original) A near-field optical probe according to claim 13, wherein said light condensing element is a holographic lens.

15. (original) A near-field optical probe according to claim 1, wherein said metallic scatterer is formed on an edge surface of an optical resonator.

16. (original) A near-field optical probe according to claim 1, wherein said metallic scatterer is formed on a light emitting edge surface of a semiconductor laser.

17. (original) A near-field optical probe, comprising:
a substrate; and
a metallic film having a pointed tip end in a contour of a planar ellipse or a triangle on a side surface or an inclined side surface of the substrate, said pointed tip end being brought into contact with a surface of a sample.

18. (original) A near-field optical probe according to claim 17, wherein said metallic film on the side surface of the substrate is coated with a transparent dielectric substance.

19. (currently amended) ~~A near-field optical microscope including a near-field optical probe according to claim 18,~~ wherein said near-field optical probe forms part of a near-field microscope.

20. (currently amended) ~~An optical recording/reading device including a A near-field optical probe according to claim 17,~~ wherein said near-field optical probe forms part of an optical recording/reading device.

Claims 21-28 (canceled)